

REQUEST FOR PROPOSAL

2018 AERIAL ORTHOIMAGERY PROJECT

Issuing Agency Georgia Mountains Regional Commission

1310 W. Ridge Road

Gainesville, Georgia 30501 Phone: (770) 538-2626

Issue Date March 27, 2017

Information Services Director Faith Bryan

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Proposal Closing Date April 14, 2017

Proposal Closing Time 2:00 PM

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SECTION 1 – SUMMARY

A. Introduction

The Georgia Mountains Regional Commission (GMRC), in coordination with multiple local governments and neighboring Regional Commissions, is soliciting qualifications and price proposals from a qualified consultant for services to capture aerial photography during leaf-off conditions and, from this source data, compile four-band (R, G, B, IR) digitally orthorectified imagery. This imagery is being acquired to support the operation of local government GIS systems for use and access by county and city managers, local economic development authorities, planning departments, emergency services, and GIS staff.

The GMRC and participating local governments intend to award a contract for work beginning during the 2018 calendar year. The selected contractor will capture aerial photography during the timeframe of January 1, 2018 through March 2, 2018 with final data delivered by September 30, 2018. Any contract award for this data collection is contingent upon GMRC receiving adequate funding for this purpose from the participating local governments.

B. Geographic Area of Work

The proposed area of interest in includes the counties of Baldwin, Banks, Barrow, Bartow, Clayton, Crawford, Dade, Dawson, Dekalb, Fannin, Forsyth, Franklin, Gordon, Habersham, Hall, Hart, Henry, Macon/Bibb, Murray, Pickens, Rabun, Rockdale, Rome/Floyd, Towns, White and Whitfield and includes the cities of Aragon, Conyers, Cornelia, Dallas, Decatur, and Emerson. A scaled map of the area of interest has been included as appendix item "A." Please note – this is subject to change.

C. Statement of Work

Digital orthophotos are to be produced from new winter 2018 natural color aerial photography of the counties and cities specified above. The orthophotos will be horizontally georeferenced to the Georgia West State Plane Coordinate System NAD83 and vertically georeferenced to the NAVD88 vertical datum. This photography must be captured at a scale sufficient for producing 1" = 100' planimetric mapping meeting the ASPRS Positional Accuracy Standards for Digital Geospatial Data Edition 1, Version 1.0, dated November 2014 and for production of natural color three-inch (3") or six-inch (6") ground sample distance (GSD) digitally orthorectified imagery. All ESRI shapefiles and ArcGIS 10.x feature classes, orthophotos, or other data created during the project shall be in this coordinate system using distance units of US survey feet.

LiDAR acquisition for this project will be coordinated with the State of Georgia Geographic Information Officer, Susan Miller. Together, we will be requesting grant funds through the USGS 3DEP Program. Please also note that Lumpkin County and Jackson County are only interested in the LiDAR acquisition through the 3DEP grant and do not require a quotation for digital orthoimagery during this flight season.

SECTION 2 – INSTRUCTIONS FOR PROPOSAL

A. Proposal Deadline

The response to this request is due no later than 2:00 p.m. Eastern Standard Time, Friday, April 14, 2017 and must arrive at the below address:

Georgia Mountains Regional Commission Attn: Faith Bryan 1310 W Ridge Road Gainesville, Georgia 30503 770-538-2614

All respondents must furnish **five (5)** copies of the proposal and shall be delivered sealed in an opaque envelope and clearly labeled as:

Georgia Mountains Regional Commission 2018 Aerial Photography Proposal

Proposals received after the scheduled deadline will not be accepted. Proposals will be marked "LATE" and will be returned unopened to the respondent. In addition, faxed or emailed proposals will not be accepted.

All proposals submitted shall become the property of Georgia Mountains Regional Commission and will not be returned. Georgia Mountains Regional Commission is not responsible for any cost incurred by the respondent in proposal preparation, presentations given, or benchmarks performed.

B. RFP Schedule

The following is the schedule for this solicitation:

Milestone	Date
RFP Released	Monday, March 27, 2017
RFP Questions Submittal Due Date	5:00 PM EST - Friday, March 31, 2017
Responses to Submitted Questions	5:00 PM EST – Friday, April 7, 2017
Proposal Due Date	2:00 PM EST - Friday, April 14, 2017
Proposal Opening Date	Thursday, April 20, 2017
Proposed Date of Award	Summer 2017

*Note: the actual schedule may change after the submittal due date. All submitting firms will be notified via email about any schedule changes.



C. Price Quotations

Proposals will include a price schedule including the <u>cost per square mile</u> for both three-inch (3") and six-inch (6") ground sample distance (GSD) digitally orthorectified imagery for each county and city listed in the area of interest.

D. Disclaimers

The Georgia Mountains Regional Commission reserves the right to withdraw this RFP at any time for any reason, and to issue clarifications, modifications, and/or addenda, as it may deem appropriate. Unless the Vendor specifies in its proposal, the GMRC may award the contract for any items/services or groups of items/services in the RFP and may increase or decrease the quantity specified. GMRC reserves the right to waive minor variances in proposals, provided they are in the best interest of the region. Any such waiver shall not modify any remaining RFP requirement. No portion of the work to be awarded under this contract shall be sublet, assigned, or otherwise disposed of, except with the written consent of GMRC. Consent to sublet, assign or otherwise dispose of any portion of the work awarded under this contract shall not be construed to relieve the Contractor of any responsibility for the fulfillment of any contract agreements. A subcontractor shall not subcontract any portion of its work under this contract. Furthermore, no work shall be performed by companies, contractors or subcontractors outside of the United States.

GMRC is an equal opportunity employer. E Verify # 66218

E. Rejection of Proposals

The Georgia Mountains Regional Commission reserves the right to accept or reject in part or in whole, any or all proposals submitted.

F. Project Contact Information

Technical issues regarding response to this request shall only be addressed by GMRC when directed to the following email address of the GMRC project contact at:

Faith Bryan, fbryan@gmrc.ga.gov

All questions must be received by 5:00 PM EST on Friday, March 31, 2017 and answers will be posted on GMRC's website by Friday, April 7, 2017.



SECTION 3 – PROPOSAL CONTENT

A. Executive Summary

An Executive Summary shall provide a brief description of the contractor's approach to accomplish the requested services and products.

B. Vendor Profile

The contractor must provide the following information relative to their firm. Similar information must be provided for each subcontractor or each member of a joint venture.

- 1. Contact Information, including Firm Name, Address, and Telephone Number
- 2. Type of ownership, indicate if the firm has done business under a different name or ownership as well as the name and location of any parent company or subsidiaries
- 3. Verification of A.S.P.R.S. active Certified Photogrammetrist status
- 4. Statement of current Vendor equipment to be used, by make, model and year, including aircraft, cameras, and general equipment
- 5. Statement of current software to be used for processing captured data requested in this proposal

C. Experience and References

Proposals shall include the names of three (3) client project managers whom have received similar products requested above during 2015 or 2016. In addition to the firm's references, also provide the following information on the experience of key personnel assigned to this project:

- Name and Title
- 2. Project Assignment
- 3. Years of Experience with this firm, with other firms
- 4. Education: Degree(s) / Years of Specialization
- 5. Active Registrations
- 6. Other relevant experience and qualifications to the proposed project complete with client name, phone number, and contact



D. Implementation Plan / Schedule

Description of the implementation plans for all project phases must include the elements detailed below. The implementation plan must identify the project team and include persons and/or organizations responsible for each phase of the work. The implementation plan must include a schedule of events in narrative and / or chart form. The schedule must include but is not limited to the following milestones:

- 1. Flight Plan
- 2. Aerial mission and ground control
- 3. Completion of aerial triangulation
- 4. Pilot Project Delivery
- 5. Orthoimagery Processing
- 6. Delivery schedule of final digital data files

E. Cost Proposal

Proposals will include a price schedule including the cost per square mile for both three-inch (3") and six-inch (6") ground sample distance (GSD) digitally orthorectified imagery for each county and city listed in the area of interest.

F. Georgia Security and Immigration Compliance Act

Vendors submitting a Qualification package in response to this RFP must provide the following information in the package to indicate compliance with the Georgia Security and Immigration Compliance Act. The form is provided for completion.

- 1. A statement that indicates the contractor will conduct itself in compliance with O.C.G.A. §13-10-91 and Rule 300-10-02 in the execution of the contract.
- 2. By completing the affidavit that is provided with this solicitation, the Vendor is attesting to the following:
 - i. The affiant has registered with and is authorized to use the federal work authorization program;
 - The user identification number and date of authorization for the affiant:
 - iii. The affiant is using and will continue to use the federal work authorization program throughout the contract period;



- iv. Any employee, contractor, or subcontractor of such contractor or subcontractor shall also be required to satisfy the requirements set forth in this paragraph.
- 3. Failure to provide the completed and notarized affidavit with the contractor's proposal will result in immediate disqualification as required by the Georgia Security and Immigration Compliance Act.

G. Product Samples

Please provide the following product samples for review with proposal, from a leaf-off 2015 or 2016 project that was conducted in the State of Georgia by your firm using the equipment and cameras your firm proposes to use:

 Aerial/Orthophotography – Four edge matched tiles of both three-inch (3") and six-inch (6") ground sample distance (GSD) digitally orthorectified imagery located in a downtown area with multi-story buildings and separate sample of rural residential neighborhood

SECTION 4 – EVALUATION AND SELECTION CRITERIA

A. Evaluation Methodology

Award shall be made to the contractor, whose proposal is determined to be the most advantageous to the Georgia Mountains RC region and the participating local governments, taking into consideration price and the evaluation factors set forth in this request for proposal.

Final determination will not be based on price alone. Proposals will first be examined to eliminate those, which are non-responsive to the stated requirements. Contractors should exercise particular care in reviewing Section 3, the proposal content section of this RFP. Those proposals, which meet the criteria set out in the RFP, will be evaluated in detail for the quality of the response.

B. Selection Criteria

The following criteria will be used to evaluate proposals. This is not intended to be a comprehensive list, nor is the arrangement of the criteria meant to imply order of importance in the selection process.

Firm Background The proposal will be evaluated based on the respondent's background, including the number of years in business, size, and financial stability.

Similar Project Experience The proposal will be evaluated based on project experience that is of a similar technical nature and complexity, for clients that are similar in size, location, and type as the GMRC project.

Technical Approach and Expertise The proposal will be evaluated on the methods and technical details that will be used to complete the project.

Equipment Ownership GMRC prefers that the respondents own all the equipment and own or license all the software to be used for the project. This preference increases the likelihood that the equipment will be properly calibrated and well maintained.

Digital Camera System Specific detail on camera system or systems to be used in the capture of information for this contract should be included for the review.

Quality Control The proposal will be evaluated based on the apparent effectiveness of the respondent's proposed quality control program.

Cost The proposal cost will be a consideration in the choice of contractor.

Product Sample Evaluation GMRC and the RFP Review Committee will review and evaluate the product samples submitted by the contractor.

C. RFP Review Committee

The RFP Review Committee will be formed of volunteers from the local government project participants. They will be charged with:

- Evaluating all submitted RFP's from Vendors
- Product sample evaluation
- and narrowing down the Vendors to the top three for presentations to all local government participants

Once the local government participants have chosen the Vendor for the project, the RFP Review Committee will make a recommendation to the GMRC Council for approval.

SECTION 5 – AERIAL PHOTOGRAPHY SPECIFICATIONS

A. Existing Monumentation and Ground Control

The GMRC, in conjunction with the participating local governments, will provide all available monumentation network data covering the contract area. To the maximum extent both possible and practicable, Vendors are strongly encouraged to make use of this monumentation network when establishing ground control in their proposals. The Vendor shall provide the location and identification of all ground control points established and used during the aerial photography mission.

B. Conditions

GMRC requires the capture of the aerial imagery to be completed between January 1, 2018 and March 2, 2018, under typical and standard climate and environmental specifications, including, and specifically, leaf-off conditions when the sky is sufficiently clear, deciduous foliage is dormant, and when the ground is not obscured by snow, haze, smoke dust, cloud shadows or other ground cover. There shall be less than 5% cloud cover and/or shadows in the imagery. During the above referenced flight dates, shadows caused by topographic relief and low sun angle shall be avoided. Aerial imagery shall not be undertaken when the sun angle is less than thirty (30) degrees above the horizon.

C. Flight Plan and Scale

The Vendor shall prepare a proposed flight plan based on Appendix A, which shall show the flight lines to be utilized along with a 500' buffer extending past each county and city boundary. This flight plan shall be submitted as part of the proposal. The final accepted flight plan to be developed after any potential contract award shall be submitted to the GMRC upon completion of the photography.

D. Four-Band Aerial Imagery

Unprocessed aerial imagery will require sufficient specifications to support all other photogrammetric procedures requested under this RFP as well as those planned beyond the scope of the RFP. The Vendor will detail all methodologies, procedures, equipment, standards, and quality control measures to create the requisite deliverables.

This imagery must be captured at a scale sufficient for producing 1" = 100' planimetric mapping meeting the ASPRS Positional Accuracy Standards for Digital Geospatial Data Edition 1, Version 1.0, dated November 2014 and for production of

four-band (red, green, blue and infrared) three-inch (3") or six-inch (6") ground sample distance (GSD) digitally orthorectified imagery. Respondents should specify the aerial photographic scales they plan to use for this project in their response and should include justification for said scale.

Unacceptable imagery tiles shall be reflown by the Vendor at no additional cost to the GMRC or the participating local governments.

The imagery will be directly captured using a very high resolution digital mapping aerial camera system. The following flight and image characteristics are to be included in the Proposal:

- a. Flying altitude in terms of above mean terrain (AMT),
- b. Forward lap (if applicable),
- c. Side lap,
- d. Climatic conditions,
- e. Cloud coverage,
- f. Ground conditions,
- g. Sun angle,
- h. Atmospheric moisture,
- i. Tip, tilt and crab,
- j. Handling of shadows,
- k. Acceptable contrast,
- I. Total number of exposures (if applicable), and
- m. Total number, total mileage, and direction of flight lines

The Proposal will include specifications regarding the aircraft and sensors to be utilized for this project. The most current product characterization report for all aerial sensors to be used to acquire imagery will be provided.

Detailed specifications for the airborne global positioning system (AGPS) and inertial measurement unit (IMU) components will be included for this Proposal. The Vendor will detail the procedures for capturing the sensor position to be recorded for every exposure, the process of the differential correction of the AGPS data, and the format and delivery system of the differentially corrected AGPS positional data and the final statistical report. The Proposal will also outline the IMU exterior orientation data processing including the recording of the sensor attitude during exposures and the format and delivery of a statistical report summarizing the overall accuracy of the adjusted IMU data.

GMRC requires that the Vendor provide a solution that will give confidence to GMRC and the project participants, that they will be able to deliver the images in compliance with the basic specifications that the images will be collected during leaf-off conditions. The Proposal will include a methodology to adequately support this requirement.

E. Aerotriangulation

The selected Vendor will perform an analytical aerotriangulation (AT) over the entire project area in order to densify the ground control.

The positional accuracy of horizontal and vertical photo control established by AT must meet acceptable root mean square errors (RMSE) on final block adjustments. The Vendor will be responsible for detailed specifications for the systems, equipment, and software used, compilation and measurement procedures, and quality control/assurance methods. The Vendor will indicate the form for a statistical report of triangulation summarizing the results of the block adjustment.

SECTION 6 – ORTHORECTIFIED IMAGERY

A. Digitally Orthorectified Imagery

Digital orthorectified imagery will be produced for the entire project area, including a buffer of 500 feet beyond each county and city boundary. The Vendor will provide detailed specifications to create a product that can sufficiently support specified mapping data, including planimetry. The source materials will consist of the aerial photography, GPS control survey, AT data, AND sensor and scanner calibration data.

The Vendor will discuss the production procedures and equipment used in their Proposal. This should include orthoimage processing, positional and tonal edgematching, and image radiometry. The images shall be tonally balanced to produce a uniform contrast and tone across the image tiles of the entire project, not just between adjacent tiles. Changes in color balance across the project area, if they exist, shall be gradual. Abrupt tonal variations between tiles are not acceptable.

This imagery will be produced to a three-inch (3") or six-inch (6") ground sample distance (GSD) digitally orthorectified imagery. **The approved image processing methodology will not allow downsampling of deliverable products**. The images will be produced to sufficient accuracy as set forth by the ASPRS Positional Accuracy Standards for Digital Geospatial Data Edition 1, Version 1.0, dated November 2014.

B. Deliverables

The final data delivery shall consist of a complete set of digital orthophoto files in GeoTIFF image format on portable HDD. A full mosaic image shall also be included for each participating county and city in MrSID™ format. The orthophoto files must be produced directly from the digital data. All orthophoto files will be georeferenced by the Vendor prior to delivery. World coordinate files (.tfw) files for each orthophoto file shall also be delivered. Additionally, a full set of MrSID™ format files, representing each tile and organized optimally for each county and city in the project area, and created with a 20:1 compression ratio, shall be provided. All digital orthophoto products shall be referenced horizontally to the Georgia State Plane Coordinate System NAD83.

Images shall be delivered in uncompressed GeoTIFF file format with no internal tiling or overviews. Data shall not be compressed during any phase of the production process.

Presence of compression artifacts will be cause for rejection. The GeoTIFF files shall include the following GeoTIFF tags and keys:

- a. ModelTiepointTag;
- b. ModelPixelScaleTag;
- c. GTModelTypeGeoKey;
- d. GTRasterTypeGeoKey;
- e. ProjectedCSTypeGeoKey;
- f. PCSCitationGeoKey;
- g. ProjLinearUnitsGeoKey.

Please note that each local government participant wishes to use existing tiling structures. Those will be submitted to the Vendor after selection has been made.

C. Quality Control and Assurance

Quality control procedures shall be utilized by the Vendor. The respondents should discuss the quality control procedures proposed for the production of digital imagery. The specific devices and procedures, the proposed methods for correcting errors, and the proposed level of support required should be detailed in the proposal.

D. Accuracy Standards

The digital orthophotos produced through this procurement shall meet the ASPRS Positional Accuracy Standards for Digital Geospatial Data Edition 1, Version 1.0, dated November 2014.

E. Metadata

GMRC and its project participants are committed to documentation of databases and related information. This documentation supports the activities of its own users as well as those external with whom data is shared. The Vendor will indicate the methodology to create the metadata. Metadata will be delivered in HTML. XML and TXT file formats.

F. Project Schedule

The Vendor will provide a project schedule of sufficient detail including all tasks and major milestones. In general, GMRC seeks good reasoning for justifying the proposed schedule and how it will best serve the interests of GMRC and the project participants.



SECTION 7 - INSPECTION, EDITING, AND ACCEPTANCE PROCEDURES OF DIGITAL FILES

A. Inspection

All imagery deliveries will be inspected by GMRC for completeness prior to shipment to local government participants. Unless specified elsewhere in this document, these deliveries will be checked within 30 days of receipt. Upon approval by GMRC, imagery may be released to local governments. The local governments will be responsible for conducting quality control/quality assurance using in-house datasets. Imagery deliverables will be subject to a combination of selective field and source inspections, which may include the following:

- 1. Upload, manipulation, and display of digital files on existing system
- 2. Digital image quality and comparison of file content to the corresponding photography / imagery
- 3. Comparison of coordinated positions of well-defined features for the orthophotography
- 4. Color balance and seamline check

B. Editing

All edits or resubmissions required by GMRC or the project participants after quality inspection must be completed and new files submitted within 30 days of their return to the Vendor.

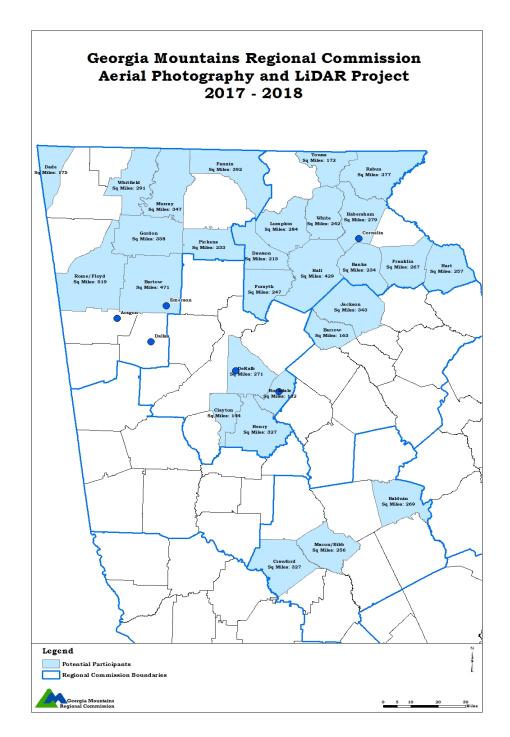
C. Acceptance

The designated project manager for GMRC <u>and</u> each participating county/city will determine final acceptance of all deliverables.

APPENDIX A

Proposed Area of Interest

* Subject to Change



APPENDIX B Table of Participants/Square Mile Coverage

County	Acres	Square Miles
Baldwin County	172140.7	269.0
Banks County	149726.2	234.0
Barrow County	104317.2	163.0
Bartow County	301259.9	471.0
Clayton County	92435.1	144.0
Crawford County	208988.0	327.0
Dade County	111696.4	175.0
Dawson County	137317.2	215.0
DeKalb County	173650.9	271.0
Fannin County	250597.4	392.0
Fayette County	127687.9	200.0
Forsyth County	158284.9	247.0
Franklin County	170793.2	267.0
Gordon County	229384.6	358.0
Habersham County	178607.4	279.0
Hall County	274850.1	429.0
Hart County	164432.4	257.0
Henry County	209131.6	327.0
Jackson County	219630.3	343.0
Lumpkin County	182009.6	284.0
Macon/Bibb County	163522.5	256.0
Murray County	222186.2	347.0
Pickens County	149052.2	233.0
Rabun County	241234.1	377.0
Rome/Floyd County	332463.3	519.0
Towns County	110099.2	172.0
White County	155091.5	242.0
Whitfield County	186542.1	291.0
City		
Aragon		1.1
Conyers		11.9
Cornelia		3.4
Dallas		4.5
Decatur		4.2
Emerson		5.9
Total Square Miles		8120.0

APPENDIX C



Affidavit Pursuant to Georgia Immigration Laws

Note: As a prerequisite to certain interactions with government entities, Georgia Law requires an affidavit regarding the subjects indicated herein.

At least one secure and verifiable document for identification purposes must be provided as required by O.C.G.A. § 50-36-1 (e)(1). This affidavit must be executed annually.

1. I am over the age of 18, of sound mind, and am competent to make this Affidavit.				
2. Initial all that apply (you may initial more than one):				
I execute this Affidavit as an applicant in Benefits, Disability Benefits, Contracts, Busin authorizing the transaction of regulated businesses and as defined by the Attorney General of the State	s, other benefits as referenced and defined i	onal Licenses, Certificates		
I execute this Affidavit as a contrac Regional Commission.	tor or subcontractor on a project of the Ge	orgia Mountains		
I submit this affidavit on behalf of	(self or business entity).			
4. With respect to my personal presence in the United State	es, I attest as follows:			
a I am a United States ci	itizen. OR			
alien or non-immigrant under the F	ent resident 18 years of age or older or l Federal Immigration and Nationality Act l egistration Number or, in the event I do not fying number below.*	lawfully present in the United		
5. (For Contractors, and Subcontractors On)With respect by me or the entity on behalf of which I sign this Affidavi immigration status of all employees, contractors or subcumber is; (c) that E-Verif contractors/subcontractors in the future, indefinitely; and immediately if there should be any change in the above state.	t, I affirm (a) that the system known as "È- contractors, as the case may be; (b) that fy will be used to verify the immigration s d (d) that I will notify the Georgia Moun	Verify" is used to determine the pertinent E-Verify user tatus of all employees and		
6. In making the above representations under oath, I employees are relying upon this affidavit, and I hereknowingly and willfully makes a false, fictitious, or frauduler of Code Section 16-10-20 of the Official Code of Georgia.	by authorize them to do so. I am av	vare that any person who		
	Signature of Applicant:	Date:		
SUBSCRIBED AND SWORN BEFORE ME ON THIS THE		2-		
Day of	Print:			
Notary Public				
My Commission Expires:				
*Aliens under the federal Immigration and Nationality Act, as amenincluded in the federal declination of "alien, legal permanent resident have an alien registration number may supply another identifying num	ents must also provide their alien registration numbe			

